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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,704	02/16/2006	Karlheinz Bortlik	3712036.00706	4852
29157	7590	02/24/2010	EXAMINER	
K&L Gates LLP P.O. Box 1135 CHICAGO, IL 60690			MI, QIUWEN	
			ART UNIT	PAPER NUMBER
			1655	
			NOTIFICATION DATE	DELIVERY MODE
			02/24/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

Office Action Summary	Application No. 10/568,704	Applicant(s) BORTLIK ET AL.	
	Examiner QIUWEN MI	Art Unit 1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) 6-8,12,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

CONTINUED EXAMINATIONS

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/29/2010 has been entered.

Applicant's amendment in the reply filed on 1/29/2010 is acknowledged. Claims 2 and 13 are cancelled. Claims 1, 3-12, 14, and 15 are pending. Claims 6-8, 12, 14, and 15 are withdrawn as they are directed toward a non-elected invention group. **Claims 1, 3-5, and 9-11 are examined on the merits.**

Any rejection that is not reiterated is hereby withdrawn.

Claim Rejections –35 USC § 112, 2nd

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-5, and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 (line 1), 9 (line 3), 10 (line 3), and 11 (line 2) recite “natural lycopene concentrate”. The term “natural lycopene concentrate” in claims 1, and 9-11 is a relative term

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which renders the claim indefinite. The term "natural" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree and one of ordinary skill in the art would not be reasonably appraisal of the scope of the invention. For instance, on page 8 of the specification, Applicant recites "The supernatant is recovered and its pH is adjusted to 7 with NaOH" (lines 5-10). Since NaOH does not exist in nature tomato, it is not clear whether the product could still be called "natural lycopene concentrate".

Thus, the metes and bounds of claims 1, and 9-11 are rendered uncertain by the phrase "natural lycopene concentrate " in claims 1, and 9-11 because "natural" could be a relative term.

All other cited claims depend directly or indirectly from rejected claims and are, therefore, also, rejected under U.S.C. 112, second paragraph for the reasons set forth above.

Claim Rejections –35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, and 9-11 are newly rejected under 35 U.S.C. 103(a) as being unpatentable over Kesharlal et al (US 6,224,876).

This is a new rejection necessitated by the Applicant's amendment filed on 1/29/2010.

Kesharlal et al teach fresh hard, good quality reddish colored "Desi Red" carrots with a smooth surface, excluding those that were found defective, were selected and washed thoroughly

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with water. The sorted and washed carrots (1.0 kg) were subjected to crushing in a fruit mill to provide a comminution which was subjected to pressing through a filter press for the purpose of separating the pulp from the juice to provide a juice (ca. 600 ml) (thus water soluble at room temperature, thus the concentrate is extracted from a lycopene-containing material without using a solvent, thus a solid-liquid separation). To the juice, 3 g of adipic acid was added with stirring (thus not more than 10% organic acid). To the resulting mixture was added 60 g of sorbitol and the mixture was subjected to centrifuging to provide paste (ca. 17.2 g). The paste was dried under high vacuum. Pulverizing of the solid material and sieving gave the carotenoid powder of the invention (3.8 g) (col 7, Example 1). The composition of the product is given below.

Composition per 100 g product from "Desi Red" carrots (Example 1): beta-Carotene 530 mg; alpha-Carotene 27 mg, Lycopene 700 mg (thus 7 mg/g; thus at least 1 mg of lycopene per g); Lutein/Xeaxanthin 15 mg; Total Carotenoids 3750 mg; Proteins 32.8 g (thus 32.8%); Carbohydrates 4 g; Phosphorus 647 mg; Lipids 15.3 g (thus 15.3%); Vitamin C 22 mg; Vitamin B1 5 mg; Vitamin B2 1 mg; Iron 95 mg; Zinc 1 mg; Manganese 1 mg; Magnesium 162 mg; Calcium 1.381 g; Potassium 1.99 g; Sodium 1.99 g; Total Minerals (Ash value) 6.87 g (col 8, 1st table). In Example 2, Kesharlal et al also teach the "Bangalore local" carrots were processed according the procedure described in Example 1. Composition per 100g product from "Bangalore local" carrots contain 30.3 g lipids (thus at least 30% lipid compounds), and protein 31.5 g (thus 31.5%). Even though Kesharlal et al do not explicitly teach not more than 30% protein, in Example 3, Kesharlal et al teach the protein range from different supplies contain 10-50% protein. Kesharlal et al further teach 5 participants sensitive to continuous exposure to sunlight and suffering from skin erythema on longer exposure were administered the tablets over

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a period of four weeks. Significant reduction of the symptoms induced by long exposure were observed (col 12, lines 20-25) (thus a cosmetic composition (that is taken orally) for slowing aging of the skin and/or to combat skin damage which may be caused by exposure to ultraviolet light). Kesharlal et al further teach the tablets (thus a composition which can be ingested orally, thus a dietary supplement) were prepared by blending nutrient-rich carotenoid powder with sucrose and Microcrystalline cellulose, granulating with Starch Gelatin paste, drying, lubricating with Talc, Magnesium stearate and Colloidal silicon dioxide followed by compression into tablet (col 10, lines 15-20).

Kesharlal et al do not explicitly teach a natural lycopene concentrate containing not more than 30% protein.

It would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to vary the amount of the protein in a natural lycopene concentrate since in Example 3, Kesharlal et al teach different supplies contain 10-50% protein. Therefore, it would have been obvious for one of the ordinary skill in the art to choose a particular protein content carrot from different carrot species or supplier. Since Kesharlal et al yielded beneficial results for producing lycopene containing product, one of ordinary skill in the art would have been motivated to make and use the invention.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

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Applicant's arguments, regarding the cited references do not teach ingestible powder form, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kesharlal et al.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qiuwen Mi whose telephone number is 571-272-5984. The examiner can normally be reached on 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on 571-272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Qiuwen Mi/

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